UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029

Mr. Larry Lawson, Director
Division of Water Program Coordination
Virginia Department of Environmental Quality
629 Main Street
Richmond, VA 23219

Dear Mr. Lawson:

The United States Environmental Protection Agency (EPA) Region III is pleased to approve the Total Maximum Daily Loads (TMDLs) for the aquatic life (benthic) use impairments on Ash Camp Creek and the North Fork and Upper Blackwater River. The TMDLs were submitted to EPA for review in February 2004. The TMDLs were established and submitted in accordance with Section 303(d)(1)(c) and (2) of the Clean Water Act to address an impairment of water quality as identified in Virginia's 1998, Section 303(d) list.

In accordance with Federal regulations at 40 CFR §130.7, a TMDL must comply with the following requirements: (1) designed to attain and maintain the applicable water quality standards, (2) include a total allowable loading and as appropriate, wasteload allocations (WLAs) for point sources and load allocations for nonpoint sources, (3) consider the impacts of background pollutant contributions, (4) take critical stream conditions into account (the conditions when water quality is most likely to be violated), (5) consider seasonal variations, (6) include a margin of safety (which accounts for uncertainties in the relationship between pollutant loads and instream water quality), (7) consider reasonable assurance that the TMDL can be met, and (8) be subject to public participation. The enclosure to this letter describes how the TMDLs for the aquatic life use impairments satisfy each of these requirements.

Following the approval of these TMDLs, Virginia shall incorporate the TMDLs into the Water Quality Management Plan pursuant to 40 CFR § 130.7(d)(2). As you know, all new or revised National Pollutant Discharge Elimination System permits must be consistent with the TMDL WLA pursuant to 40 CFR §122.44 (d)(1)(vii)(B). Please submit all such permits to EPA for review as per EPA's letter dated October 1, 1998.

If you have any questions or comments concerning this letter, please don't hesitate to contact Mr. Peter Gold at (215) 814-5236.

Sincerely,

Jon M. Capacasa, Director
Water Protection Division

Enclosure

Decision Rationale

Total Maximum Daily Loads for
the Aquatic Life Use Impairments on Ash Camp Creek,
North Fork of the Blackwater River and the Upper Blackwater River

I. Introduction

The Clean Water Act (CWA) requires a Total Maximum Daily Load (TMDL) be developed for those water bodies identified as impaired by a state where technology-based and other controls will not provide for attainment of water quality standards. A TMDL is a determination of the amount of a pollutant from point, nonpoint, and natural background sources, including a margin of safety (MOS), that may be discharged to a water quality-limited water body.

This document will set forth the Environmental Protection Agency's (EPA) rationale for approving the TMDLs for the aquatic life use (benthic) impairments on Ash Camp Creek and the Upper Blackwater River. EPA's rationale is based on the determination that the TMDLs meet the following eight regulatory conditions pursuant to 40 CFR §130.

1) The TMDLs are designed to implement applicable water quality standards.
2) The TMDLs include a total allowable load as well as individual waste load allocations and load allocations.
3) The TMDLs consider the impacts of background pollutant contributions.
4) The TMDLs consider critical environmental conditions.
5) The TMDLs consider seasonal environmental variations.
6) The TMDLs include a margin of safety.
7) There is reasonable assurance that the TMDLs can be met.
8) The TMDLs have been subject to public participation.

II. Background

The Ash Camp Creek and Upper Blackwater River Watersheds are located in Charlotte and Franklin County, Virginia respectively. Ash Camp Creek is a tributary to Roanoke Creek in the Roanoke River basin. The impaired segment runs 2.36 miles from the 654 Bridge to its confluence with Roanoke Creek. The 6,134-acre watershed is rural with forested lands making up 74 percent of the watershed area. The remainder of the watershed is split between agriculture (14%), wetlands (6%), transitional lands (4%), and developed lands (2%).

The Upper Blackwater River TMDL addresses impaired segments of the Upper and North Fork of the Blackwater River. The 5.62 mile, impaired segment of the Upper Blackwater River runs from the confluence of the North and South Fork to 0.1 miles downstream of Route 737. The North Fork of the Blackwater River is impaired for three miles upstream (Route 739)

of its confluence with the South Fork of the Blackwater River. Both of the Blackwater River watersheds are rural with wooded lands accounted for approximately 70 percent of the area in each watershed. The remainder of the watersheds are composed of agricultural lands with small developed areas and ponds.

In response to Section 303(d) of the CWA, the Virginia Department of Environmental Quality (VADEQ) listed Ash Camp Creek (VAC-L39R) and the Upper and North Fork of the Blackwater River (VAW-L08R) on Virginia's 1998 Section 303(d) list as being unable to attain the general standard for the aquatic life use. The Blackwater River segments were listed for primary contact use impairments from their failure to attain the bacteriological (fecal coliform) criteria as well. TMDLs have been developed to address the bacteriological impairments. This decision rationale will address the TMDLs for the impairment of the general standard for the aquatic life use. The failure to attain this use was determined through biological assessments of the benthic macroinvertebrate community.

Virginia's 305(b)/303(d) guidance states that support of the aquatic life beneficial use is determined by the assessment of conventional pollutants (dissolved oxygen, pH, and temperature); toxic pollutants in the water column, fish tissue, and sediments; and biological evaluation of benthic community data.[1] Therefore, a biological assessment of the benthic community can be used to determine a stream's compliance with the state's general standard for the aquatic life use. Virginia uses EPA's Rapid Bioassessment Protocol II (RBPII) to determine status of a stream's benthic macroinvertebrate community.[2] This approach evaluates the benthic macroinvertebrate community between a monitoring site and its reference station. Measurements of the benthic community, called metrics, are used to identify differences between monitored and reference stations.[3] Please note that the state is currently in the process of changing this methodology to a stream condition index (SCI) approach.

As part of the RBPII approach, reference stations are established on streams which are minimally impacted by humans and have a healthy benthic community. These reference stations represent the desired community for the monitored sites. Monitored sites are evaluated as non-impaired, slightly impaired, moderately impaired, or severely impaired based on a comparison of the biological community of the reference and monitored sites. Streams that are classified as moderately (after a confirmatory assessment) or severely impaired after an RBPII evaluation are classified as impaired and are placed on the Section 303(d) list of impaired waters. During the 1998 assessment period, Ash Camp Creek and the Upper and North Fork of the Blackwater River were identified as being moderately impaired. Water quality appears to have improved on

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[1]VADEQ. 1997. 1998 Water Quality Assessment Guidance for 305(b) Water Quality Report and 303(d) TMDL Priority List Report. Richmond, VA.

[2]Tetra Tech 2002. Total Maximum Daily Load (TMDL) Development for Blacks Run and Cooks Creek. Fairfax, Virginia.

[3]Ibid 2

portions of the Upper Blackwater River Segment possibly as a result of the restoration efforts occurring within the watersheds associated with the previous TMDL. Seven miles (river mile 58 to 52) of the 1998 listed segment were deemed to be attaining the aquatic life use.

The RBPII analysis assesses the health of the macroinvertebrate community of a stream. The analysis will inform the biologist if the stream's benthic community is impaired. However, it will not inform the biologist as to what is causing the degradation of the benthic community. Additional analysis is required to determine the pollutants which are causing the impairment. TMDL development requires the identification of impairment causes and the establishment of numeric endpoints that will allow for the attainment of designated uses and water quality criteria.[4] A reference watershed approach was used to determine the stressors and the endpoints for the Ash Camp Creek and Blackwater River TMDLs. Numeric endpoints represent the water quality goals that are to be achieved through the implementation of the TMDLs which will allow the impaired waters to attain their designated uses. A reference watershed approach is based on selecting a non-impaired watershed that shares similar landuse, ecoregion, and geomorphological characteristics with the impaired watershed. The stream conditions and loadings in the reference stream are assumed to be the conditions needed for the impaired stream to attain standards.

To determine whether a stream was a suitable reference site for the monitored sites, the modelers evaluated the topography, soils, ecoregion, landuses, watershed size, and point source inventory of the potential reference site. A reference site candidate was removed if it was identified as moderately or severely impaired in the biomonitoring analysis. The reference site selected for the Ash Camp Creek watershed was the unimpaired upper segment of Twittys Creek. Big Chestnut Creek was the reference site for the Blackwater River segments. Big Chestnut Creek was evaluated as unimpaired when using the SCI approach.

The next step in the TMDL development process was to determine the loadings and stressors in the monitored and reference watersheds. Low dissolved oxygen (DO), sedimentation, habitat modification, nutrients, and toxic pollutants were evaluated as possible stressors to the monitored streams. Ambient water quality monitoring on the streams documented temperature, DO, pH, turbidity, total suspended solids (TSS), nitrogen, and phosphorous.

To get a better understanding of the DO concentrations during the most critical periods, diurnal DO sampling was conducted on August 14-15, 2003, for Ash Camp Creek. During this study, DO concentrations were monitored hourly at several locations in the impaired and reference watersheds over a 24-hour period. These samples were taken at the end of the summer season when the lowest DO concentrations are expected to be found due to a combination of high water temperatures (lower solubility of oxygen) and low flows. The diurnal DO data also captures the impacts of respiration from primary producers on the stream system. During the evening and early morning hours, these organisms cease photosynthetic operations since there is no sunlight available and consume oxygen. All of the samples collected during this period had

[4]Ibid 2

DO concentrations in compliance with the applicable criteria.

A similar diurnal DO sampling event was conducted in the Upper and North Fork of the Blackwater River. The sampling was conducted in September of 2002. The goal of the study was to observe DO concentrations at the most critical times when the flows are low, temperatures are high, and respiration occurs. The Upper Blackwater was found not to have a DO problem as the DO levels remained above the applicable criteria. The North Fork of the Blackwater River was found to have a DO problem as the DO concentrations dipped below the applicable criteria. Nutrients were seen as the cause of this problem on the North Fork of the Blackwater River. The Upper Blackwater River was not seen as having a nutrient problem since the DO concentrations did not drop beneath the applicable criteria.

Toxicity testing was conducted for water samples collected from the impaired waters. The testing compared the survival and growth rates or fathead minnows (Pimephales promelas) and water fleas (Ceriodaphnia dubia) in water collected from the impaired sites with an unimpaired water source. The test did not document any statistically significant effects associated with fathead minnows or water fleas reared in water from Ash Camp Creek. However, a higher mortality rate was observed in fathead minnows reared in water from the Blackwater River sites. Toxicity was seen as a possible stressor in the Blackwater system, however, additional sampling is warranted to confirm these results and in the interim the sediment reductions are expected to reduce the toxicity problem as toxic substances bound to the sediment will be reduced as well.

As expected, Ash Camp Creek and the Blackwater River had poorer water quality than their reference watersheds, please see Section 3.0 of the report for additional information on these results. Therefore, several stressors were seen as possible causes or contributors to the benthic impairment on Ash Camp Creek and the Blackwater River. However, after reviewing the benthic and water quality data it was determined that excessive sediment was the most probable stressor to the Ash Camp Creek and Upper Blackwater River segments. Phosphorus and sediment were identified as impacting the North Fork of the Blackwater River. The TMDLs were developed to control the stressors in order for the streams to attain the aquatic life use criteria.

The next step in developing these TMDLs was to determine the sediment and phosphorus (the stressors) loadings to the monitored and reference segments. The Generalized Watershed Loading Functions (GWLF) model was selected as the means to determine loadings to the streams. The GWLF model provides the ability to simulate runoff, sediment, and nutrient loadings from watersheds given variable source areas (e.g., agricultural, forested, and developed land).[5] GWLF is a continuous simulation model that uses daily time steps for weather data and water balance calculations.[6] Calculations are made for sediment based on daily water balance

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[5]Ibid 2

[6]Ibid 2

totals that are summed to give monthly values. To equate the reference watersheds with the monitored watersheds, the reference watersheds were decreased in size to that of the impaired watersheds in the model, the landuses were proportionally decreased based on the percent land use distribution. Therefore, the landuse breakdown in the reference watershed remained constant.

Local rainfall and temperature data were needed to simulate the hydrology. The Camp Pickett (Ash Camp Creek) and Rocky Mount (Upper Blackwater River) weather stations were used for these TMDLs. To insure that the models accurately predicted the stream flow the modeled flow results were compared to the observed flows, a process known as calibration. The models' parameters were adjusted based on these results to insure the most accurate representation of the system. The Blackwater River TMDLs were calibrated to flows observed at United States Geological Survey Gage (USGS) 02056900 on the Blackwater River. Big Chestnut Creek was modeled to the same gage although the landuses were changed to reflect the reference watershed. Ash Camp Creek and Twittys Creek were both calibrated to USGS gage 02051000 in the North Meherrin River. The results of the models are documented in Section 5.0 of the report. Table 1 documents the TMDL allocations to the impaired segments.

Table 1 - Summarizes the Sediment Allocations for Ash Camp Creek and the Upper Blackwater River TMDLs.

Stream	Pollutant	TMDL (tons/yr)	WLA (tons/yr)	LA (tons/yr)	MOS*(tons/yr)
Ash Camp Creek	Sediment	289.2	20.7	239.6	28.9
N.F. Blackwater River	Sediment	2,497.3	0.0	2,247.5	249.7
N.F. Blackwater River	Phosphorous	3.48	0.0	3.132	0.348
Upper Blackwater River	Sediment	5,538.6	0.526	4,984.2	553.9

* Virginia includes an explicit MOS by reserving the 10 percent of total loading to the MOS.

The United States Fish and Wildlife Service has been provided with copy of these TMDLs.

III. Discussion of Regulatory Conditions

EPA finds that Virginia has provided sufficient information to meet all of the eight basic requirements for establishing aquatic life use (benthic) impairment TMDLs for Ash Camp Creek and the Upper and North Fork of the Blackwater River. EPA is therefore approving these TMDLs. EPA's approval is outlined according to the regulatory requirements listed below.

1) The TMDLs are designed to meet the applicable water quality standards.

The impaired segments were listed as impaired due to a degradation of their benthic macroinvertebrate communities. As mentioned above, benthic assessments inform the biologist

of an impairment, but they are unable to identify stressors conclusively. Therefore, a reference watershed approach was used to identify the stressors to these streams. Virginia has indicated that excessive levels of sediment have caused the degradation of the benthic communities in Ash Camp Creek and the Upper Blackwater River. Excessive sediment and phosphorous loadings were identified as causing the impairment on the North Fork of the Blackwater River. The Commonwealth does not have numeric standards for sediment at this time. Therefore, the loadings obtained from the reference watersheds were used as the endpoints for these TMDLs. Its believed that if these streams can reduce their sediment and phosphorous (North Fork Blackwater River) loadings to that of the area weighted reference watershed, the impairment to the benthic communities will be relieved.

The GWLF model was used to determine the loading rates of the stressors (sediment and phosphorous) to the streams from all point and nonpoint sources. The TMDL modelers determined the applicable stressor loading rates within each watershed. Data used in the model was obtained on a wide array of items, including landuses in the area, point sources in the watershed, weather, stream geometry, etc..

The GWLF model provides the ability to simulate runoff and sediment loadings from watersheds given variable source areas (e.g., agricultural, forested, and developed land). GWLF is a continuous simulation model that uses daily time steps for weather data and water balance calculations.[7] To equate the reference watersheds with the monitored watersheds, the reference watersheds were decreased in size to that of the impaired stream in the model. Each landuse was decreased in equal proportion, insuring that the landuse breakdown in the reference watershed remained constant. Local rainfall and temperature data were needed to simulate the hydrology, this data was obtained from the Camp Pickett (Ash Camp Creek) and Rocky Mount (Blackwater Segments) weather stations. In the GWLF model, the nonpoint source load calculation is affected by terrain conditions, such as the amount of agricultural land, land slope, soil erodibility, and farming practices used in the area.[8] Parameters within the model account for these conditions and practices. The Blackwater segments were modeled to the flows observed at a USGS gage within the watershed. The remaining watersheds were modeled to observed flows from USGS stations outside of the watersheds. This calibration was then transferred to the other

watersheds where changes in landuse were noted and adjusted for.

EPA believes that using GWLF to model and allocate the sediment loadings to the impaired stream segments will ensure the attainment of the designated uses and water quality standards on these streams. Several best management practices (BMPs) have already been put in place within the Blackwater River watershed in association with the Implementation Plan for the Fecal Coliform TMDL. These BMPs which are geared to remove cattle from the stream have alleviated some of the sedimentation problems within the streams as observed via the recent

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[7]Ibid 2

[8]Ibid 2

benthic assessments.

A separate model was used to assess the sediment originating from bank erosion. The Annualized Agricultural Nonpoint Source model breaks down the sediment in the stream to three sediment classes and determines the carrying capacity for the stream of these classes for each flow. If the amount of sediment delivered to the stream exceeds the carrying capacity, deposition occurs. Scouring occurs when the stream's carrying capacity exceeds its sediment load. Both impaired streams were depositional since their carrying capacity's were exceeded and no stream bank reductions were required. It should be noted that the stream is an active system with scouring and deposition occurring throughout the system. This analysis shows that there is a net gain in bank sediments.

2) The TMDLs include a total allowable load as well as individual waste load allocations and load allocations.

Total Allowable Loads

Virginia indicates that the total allowable loading is the sum of the loads allocated to land based precipitation driven nonpoint source areas (forest and agricultural land segments) and point sources. Activities that increase the levels of nutrients and sediment to the land surface or their availability to runoff are considered flux sources. The actual value for total loading can be found in Table 1 of this document. The total allowable load is calculated on an annual basis.

Waste Load Allocations

Virginia has stated that there are three regulated point sources discharging to the impaired segments. Two facilities are discharging to the Blackwater system. One of these facilities is an elementary in the South Fork of the Blackwater River which is a tributary to the Upper Blackwater. This small facility has a design flow of 1,900 gallons per day and a permitted TSS concentration of 30 mg/l. The other facility in the Blackwater River is a small stormwater system for the Department of Transportation. This facility discharges approximately 3,000 gallons per day (note this is based on annual flows derived from the model) with a TSS concentration of 100 mg/l. Both of these facilities make up a inconsequential portion of the total loading in the Blackwater River.

Ash Camp Creek has a large facility discharging TSS. The Keysville Sewage Treatment Plant discharges 20.7 tons of sediment to Ash Camp Creek each year. It has a daily flow of 500,000 gallons per day and a TSS concentration of 30 mg/l. It should be noted that permitted facilities often discharge at lower levels and concentrations then their permit requires. Therefore, the total loading from the Keysville facility may in fact be less than its allocation.

EPA regulations require that an approvable TMDL include individual waste load allocations (WLAs) for each point source. According to 40 CFR 122.44(d)(1)(vii)(B), "Effluent limits developed to protect a narrative water quality criterion, a numeric water quality criterion, or both, are consistent with assumptions and requirements of any available WLA for the discharge prepared by the state and approved by EPA pursuant to 40 CFR 130.7." Furthermore,

EPA has authority to object to the issuance of any National Pollutant Discharge Elimination System (NPDES) permit that is inconsistent with the WLAs established for that point source.

Table 2 - TSS WLAs for Ash Camp Creek and the Upper Blackwater River

Stream	Facility	Permit Number	Permitted Flow (gpd)	Permitted Concentration (mg/L)	TSS Load (tons/yr)
Ash Camp Creek	Keysville Sewage Treatment Plant	VA0024058	500,000	30 mg/L	20.7
Blackwater River	Callaway Elementary	VA0088561	1,900	30 mg/L	0.0789
Blackwater River	VA Department of Transportation	VAR101262	3.200	100 mg/L	0.447

Load Allocations

According to Federal regulations at 40 CFR 130.2(g), load allocations (LAs) are best estimates of the loading, which may range from reasonably accurate estimates to gross allotments, depending on the availability of data and appropriate techniques for predicting loading. Wherever possible, natural and nonpoint source loads should be distinguished.

In order to accurately simulate landscape processes and nonpoint source loadings, VADEQ used the GWLF model to represent the impaired watersheds. The GWLF model is a comprehensive modeling system for the simulation of watershed hydrology, point and nonpoint source loadings, and receiving water quality. GWLF uses precipitation data for continuous and storm event simulation to determine total loading to the impaired segments from the various landuses within the watershed. Many BMPs have been implemented in the Blackwater River watershed as a result of the Implementation Plan for the Fecal Coliform TMDLs. Table 3 provides the LA for all of the nonpoint sources of sediment. Table 4 provides the LA for all of the nonpoint sources of phosphorous.

Table 3 - LA for Sediment for Ash Camp Creek and the Upper Blackwater River

	Ash Camp Creek	Upper Blackwater River	North Fork of the Blackwater River

Land Use	LA Sediment (tons/yr)	Percent Reduction	LA Sediment (lbs/yr)	Percent Reduction	LA Sediment (lbs/yr)	Percent Reduction
Row Crop	72.5	62.9	2,347.9	64	746.3	64.8
Pasture/Hay	120.5	53.8	2,010.1	52.7	1,183.3	45.2
Pasture/Hay (steam access)	n/a	n/a	43.5	37.8	35.9	31.6
Transitional	41.8	62.5	0.0	0	0	0
Forest	4.9	0	582.7	0	282	0
Urban	0.0	0	0.0	0	0	0
Total	239		4984		2,247	

Table 4- LA for Phosphorous for the North Fork of the Blackwater River

	North Fork of the Blackwater River	
Land Use	LA Sediment (tons/yr)	Percent Reduction
Row Crop	0.702	61
Pasture/Hay	1.368	35
Pasture Hay (stream access)	0.08	28
Forest	0.2	0
Urban	0.07	12
Septic System	0.073	24
Groundwater	0.638	0

Total		

3) The TMDLs consider the impacts of background pollution.

The reference watershed approach inherently considers the impact of background pollutants by considering the sediment and phosphorous load from all landuses, including forested lands, within the impaired and reference watersheds.

4) The TMDLs consider critical environmental conditions.

According to EPA's regulation 40 CFR 130.7 (c)(1), TMDLs are required to take into account critical conditions for stream flow, loading, and water quality parameters. The intent of this requirement is to ensure that the water quality of the impaired segments is protected during times when it is most vulnerable.

Critical conditions are important because they describe the factors that combine to cause a violation of water quality standards and will help in identifying the actions that may have to be undertaken to meet water quality standards[9]. Critical conditions are a combination of environmental factors (e.g., flow, temperature, etc.), which have an acceptably low frequency of occurrence. In specifying critical conditions in the waterbody, an attempt is made to use a reasonable "worst-case" scenario condition. For example, stream analysis often uses a low-flow (7Q10) design condition when the ability of the waterbody to assimilate pollutants without exhibiting adverse impacts is at a minimum.

The GWLF model was run over a multi-year period for the reference watershed to insure that it accounted for wide range of climatic conditions within the reference watershed. The allocations developed in the TMDL will therefore insure that the criteria is attained over a wide range of environmental conditions.

5) The TMDLs consider seasonal environmental variations.

Seasonal variations involve changes in stream flow and loadings as a result of hydrologic and climatological patterns. In the continental United States, seasonally high flows normally occur in early spring from snow melt and spring rain, while seasonally low flows typically occur

[9]EPA memorandum regarding EPA Actions to Support High Quality TMDLs from Robert H. Wayland III, Director, Office of Wetlands, Oceans, and Watersheds to the Regional Management Division Directors, August 9, 1999.

during the warmer summer and early fall drought periods. Pollutant loadings also change during the year as vegetation grows making it more difficult for sediments to runoff. Consistent with the discussion regarding critical conditions, the GWLF model and TMDL analysis effectively considered seasonal environmental variations through the use of observed weather data over an extended period of time and modifying the soil loss equations based on the time of the year.

6) The TMDLs include a margin of safety.

This requirement is intended to add a level of safety to the modeling process to account for any uncertainty. The MOS may be implicit, built into the modeling process by using conservative modeling assumptions, or explicit, taken as a percentage of the WLA, LA, or TMDL. Virginia includes an explicit MOS by allocating 10 percent of the total TMDL loading to the MOS.

7) There is a reasonable assurance that the TMDLs can be met.

EPA requires that there be a reasonable assurance that the TMDLs can be implemented. WLAs will be implemented through the NPDES permit process. According to 40 CFR 122.44(d)(1)(vii)(B), the effluent limitations for an NPDES permit must be consistent with the assumptions and requirements of any available WLA for the discharge prepared by the state and approved by EPA. Furthermore, EPA has authority to object to issuance of an NPDES permit that is inconsistent with WLAs established for that point source.

Nonpoint source controls to achieve LAs can be implemented through a number of existing programs such as Section 319 of the CWA, commonly referred to as the Nonpoint Source Program.

8) The TMDLs have been subject to public participation.

The public participation process for the Blackwater River TMDL commenced on November 13, 2002, with a stakeholder and TMDL study kickoff meeting. There were two public meetings held at the Community and Hospitality Center in Rocky Mount, Virginia. These meetings were held on January 28, 2003 and December 18, 2003. Ten stakeholders attended the first meeting and six attended the second. The meetings were announced in the Virginia Register and there was a thirty day comment period associated with the meetings. One e-mail question was received after the second meeting.

The public participation process for the Ash Camp Creek TMDL commenced on April 1, 2003, with a stakeholder and TMDL study kickoff meeting. There were two public meetings held at the Charlotte County Administration Building in Charlotte Court House, Virginia. These meetings were held on October 15, 2003 and December 2, 2003. The meetings were announced in the Virginia Register and there was a thirty day comment period associated with the meetings. There were no comments submitted as a result of these meetings.